

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,418	01/22/2004	Michael H. Feige	GEKAN 3228	4549

23465 7590 07/01/2004

JOHN S. BEULICK
C/O ARMSTRONG TEASDALE, LLP
ONE METROPOLITAN SQUARE
SUITE 2600
ST LOUIS, MO 63102-2740

EXAMINER

SHECHTMAN, SEAN P

ART UNIT

PAPER NUMBER

2125

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/762,418	Applicant(s) FEIGE, MICHAEL H.	
	Examiner Sean P. Shechtman	Art Unit 2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/22/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-20 are presented for examination.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, 1) the automatic selection of at least one tool based on the planning program, 2) the planning program including a plurality of operations to fabrication the object, 3) the program configured to recognize a subassembly or part not selected by an operator, 4) the automatic updating of a list of operations to fabricate an object, 5) a list of operations, 6) automatically modifying a tooling list, 7) a tooling list, 8) a tool, a distinct part and subassembly, 9) a tooling list included in a planning program, 10) a planning program, 11) an apparatus, 12) a manufacturing tool, 13) a computer, and 14) a computer coupled to a manufacturing tool must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR

Art Unit: 2125

1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:

Referring to page 2, paragraph 0012, line 2, "Figure 3" should be rephrased "Figure 5".

Referring to page 5, paragraph 0022, Figure 6 is actually a perspective of Figure 5 with feature 32 modified and feature 34 deleted (See page 6, paragraph 0023 of the instant specification).

Referring to page 6, paragraph 0024, examiner believes that the specification would be more clear if applicant gave a brief explanation of exactly how the program is modified to skip these steps. Examiner respectfully notes page 5, paragraph 0021, wherein applicant points to operation 020 as having "not been performed", wherein operation 020 clearly states "NOT REQUIRED". Examiner believes that paragraph 0024 fails to clearly point out how the program is modified, namely, that operation 020 has not been performed and "PART FOUR OPERATION 010 FLAME CUT TO DRAWING" and "PART FOUR OPERATION 020 PREP FOR WELDING" has been omitted.

Page 9, paragraph 0034 presents a similar situation as that noted above in reference to page 6, paragraph 0024.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

Art Unit: 2125

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 4, 5, 7, 11, 12, 14, 18, and 19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Examiner specifically points to the term “recognize” only as it is used in the phrase “program configured to recognize at least one of a subassembly or a part not selected”.

Claims 4, 5, 7, 11, 12, 14, 18, and 19 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for not turning on a portion of a program if that portion is not selected by an operator, does not reasonably provide enablement for a program configured to recognize a subassembly or part that has not been selected. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims.

Examiner respectfully submits that the specification fails to reasonably provide enablement for any such recognition program, inference engine/database, expert system, artificial intelligence, learning robot or any other means/system configured to recognize a subassembly or part that has not been selected. Examiner respectfully submits that, although the specification does reasonably provide enablement for not turning on a portion of a program when the operator may desire not to select a specific subassembly or part (See page 4, paragraph 0018 of the instant specification), the specification teaches that this causes the program to skip or omit steps, not recognize what the operator intended to not select.

Examiner respectfully submits the instant specification would be enabling for a program configured to recognize at least one of a subassembly or a part not selected, if the program was specifically taught and claimed as a particular continuously program, wherein, every sequence of a program must be executed unless a specific portion is turned off. If such is the case, examiner respectfully asserts that the specification fails to clearly teach that the program was a specific continuous program, wherein every sequence of a program must be executed unless a specific portion is turned off, as clearly seen with reference to page 5, paragraph 0022 – page 6, paragraph 0024 of the instant specification. In said portion of the specification, the portion of the planning program “PART FOUR OPERATION 010 FLAME CUT TO DRAWING” and “PART FOUR OPERATION 020 PREP FOR WELDING” has not be turned off, but rather, completely omitted.

5. Due to the vagueness and a lack of clear definition of the terminology and phrases used in the specification and claims, the claims have been treated on their merits as best understood by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 2125

6. Claims 1, 3, 8, 10, 15, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5,818,721 to Funahashi.

Referring to claims 1, 8, 15, Funahashi teaches a computer and method (Fig. 5, element 40; Col. 4, line 64; Col. 4, line 51-56) for facilitating manufacturing (Col. 1, lines 28-40; Col. 6, lines 58-59) with at least one manufacturing tool (Col. 1, lines 41-50), said computer configured to:

generate a computer model of an object generated using a design program (Col. 4, lines 51-56; Col. 5, lines 63-67); and

automatically extracting the model from the design program and automatically input the computer model into a planning program (Col. 5, line 63 – Col. 6, line 12); and

fabricating the object using the tool based on the planning program (Col. 6, lines 7-8; Col. 1, line 41-50).

Funahashi clearly teaches that the CAD device can “automatically convert the synthesized design into a work program” (Col. 6, lines 1-3).

Referring to claims 3, 10, and 17, Funahashi teaches a computer in accordance with Claim 15, wherein said computer is further configured to automatically input at least a portion of the computer model into a planning program, said planning program including a plurality of operations to fabricate the object (Col. 3, lines 21-40).

7. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pub. No. 2003/0171842 to Teramoto.

Art Unit: 2125

Referring to claims 1, 4, 7, 8, 11, 14, 15 and 18, Teramoto teaches a computer and method for facilitating manufacturing (Page 12, paragraph 174) with at least one manufacturing tool (Page 12, paragraph 176), said computer configured to:

generate a computer model of an object generated using a design program (Page 12, paragraph 174); and

automatically extracting the model from the design program and automatically input at least a portion of the computer model into a planning program (Page 12, paragraph 174-175; Pages 1-2, paragraph 10; Page 2, paragraph 15, all integrated).

said planning program configured to recognize at least one of a subassembly and a part not selected by an operator (Page 12, paragraph 166); and

automatically update the planning program/list of operations to fabricate the object (Page 19, claim 6); and

and fabricating the object using the manufacturing tool based on the planning program (Page 12, paragraphs 174-176).

Examiner asserts that the automatic updating of the program does not require the program to automatically update as a function of or in response to such recognition.

Teramoto teaches an invention that recognizes the portions of work already machined in previous processes and generates NC data with so that the already-machined portions are not re-machined (Page 12, paragraph 166). Examiner asserts that such a recognition is recognizing at least a part or subassembly that the operator does not select because they have already been machined (See figures 3 and 4 of the instant specification, wherein it is clear that a part or subassembly not selected is a cutout).

Referring to claim 2, 9, 16, Teramoto teaches a computer in accordance with Claim 15, wherein said computer is further configured to automatically select a tool based on the planning program (Page 12, paragraph 176).

Referring to claims 3, 10, 17, Teramoto teaches a computer in accordance with Claim 15, wherein said computer is further configured to automatically input at least a portion of the computer model into *a* planning program including a plurality of operations to fabricate *an* object (Page 12, paragraph 176).

Referring to claim 5, 12, 19, Teramoto teaches a computer in accordance with Claim 18, wherein said computer further configured to automatically modify *a* tooling list (Page 12, paragraph 176).

Referring to claim 6, 13, 20, Teramoto teaches a computer in accordance with Claim 15, wherein said computer further configured to automatically input at least a portion of the computer model into *a* planning program including *a* tooling list (Page 9, paragraph 105 and 112).

8. Claims 1-20 are rejected under 35 U.S.C. 102(c) as being anticipated by U.S. Pub. No. 2003/0033048 to Nakamura.

Referring to claims 1, 4, 7, 8, 11, 14, 15 and 18, Nakamura teaches a computer and method for facilitating manufacturing (Page 3, paragraph 34) with at least one manufacturing tool (Page 1, paragraph 1), said computer configured to:

generate a computer model of an object generated using a design program (Page 3, paragraph 37; Page 1, paragraph 5); and

Art Unit: 2125

automatically extracting the model from the design program and automatically input at least a portion of the computer model into a planning program (Page 3, paragraph 42; Page 3, paragraph 38-40; Fig. 5B).

said planning program configured to recognize at least one of a subassembly and a part not selected by an operator (Page 2, paragraph 16; Page 4, paragraph 53; See figures 3 and 4 of the instant specification, wherein it is clear that a part or subassembly not selected is a cutout or as Nakamura teaches, deletion to only portions where the shape differs in Page 2, paragraph 16); and

automatically update the planning program/list of operations to fabricate the object (Page 5, paragraph 56); and

and fabricating the object using the manufacturing tool based on the planning program (Page 5, paragraph 62).

Referring to claim 2, 9, 16, Nakamura teaches a computer in accordance with Claim 15, wherein said computer is further configured to automatically select a tool based on the planning program (Page 1, paragraph 5).

Referring to claims 3, 10, 17, Nakamura teaches a computer in accordance with Claim 15, wherein said computer is further configured to automatically input at least a portion of the computer model into *a* planning program including a plurality of operations to fabricate *an* object (Fig. 5B).

Referring to claim 5, 12, 19, Nakamura teaches a computer in accordance with Claim 18, wherein said computer further configured to automatically modify *a* tooling list (Page 2, paragraph 16; Page 4, paragraph 53).

Art Unit: 2125

Referring to claim 6, 13, 20, Nakamura teaches a computer in accordance with Claim 15, wherein said computer further configured to automatically input at least a portion of the computer model into *a* planning program including *a* tooling list (Page 2, paragraph 16; Page 4, paragraph 53).

Conclusion

9. The prior art or art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents or publications are cited to further show the state of the art with respect to a deleting CAD data and automatically generating CAM data.

U.S. Pat. No. 5,727,642 to Suzuki.

The following patents or publications are cited to further show the state of the art with respect to a skip instruction in CAD data.

U.S. Pat. No. 6,125,304 to Suzuki (Figs. 6A and 6B).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean P. Shechtman whose telephone number is (703) 305-7798.

The examiner can normally be reached on 9:30am-6:00pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (703) 308-0538. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2125

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SPS

Sean P. Shechtman

June 25, 2004


ALBERT W. PALADINI
PRIMARY EXAMINER